

METHODOLOGY

Using Global Fishing Watch (GFW), Oceana Canada has compiled a list of vessels that exhibited speeds exceeding the voluntary 10-knot limit in Cabot Strait.

Note: this data is limited to only vessels that have Automatic Identification Systems (AIS), so not all vessels are represented. Fishing vessels are not required to broadcast AIS in Canada, although many do. Additionally, due to COVID-19 restrictions cruise ships with more than 500 hundred people were not allowed to dock in Canada during the study period.

We collected data including “Signals” which represented the number of distinct AIS signals above the 10-knot speed limit that were transmitted by a vessel inside the speed restriction zone on a given day, and the “Speed” which represents the highest speed attained by that vessel on that particular day. In some cases, a vessel may have transmitted speeds in excess of 10 knots on separate days and will appear in our research more than once, but in our summary statistics, these are treated as one distinct vessel and their highest speed over the observation period is what is used in the summary statistics.

Data for the report was pulled from GFW’s vessel database. The data was filtered to only include vessels that recorded at least two AIS signals in the timeframe of April 28 – June 15, when the voluntary Cabot Strait slowdown was in place.

The data was analyzed for erroneously high speeds, which were also removed. For example, if a ship’s AIS recorded the following consecutive speeds: 11, 12, 11, 11, 38, 12, then the outlier would be removed from the data as an error. In some cases, a vessel's highest recorded AIS signal was cross-referenced with online resources and could be discounted as an error based on a large discrepancy between the AIS signal and the maximum attainable speed of that vessel.

To obtain the speed compliance value, the number of distinct vessels with at least two AIS signals and at least one AIS signal over 10 knots in the speed restriction zone was divided by the total number of distinct vessels with at least two AIS signals in the speed restriction zone.